

Background

The release of the open-source platform ChatGPT (Generative Pre-trained Transformer) in November 2022, created a massive interest in the possibilities of A.I. based chatbots [1]. While there is an ongoing discussion about the possibilities and risks of use of ChatGPT in nursing education [1] as well as about ethical considerations [2], less is known how A.I. could be used in nursing practice. [1].

Aim(s)

The aim of this study is to find out if answers on nursing related questions from nurses and generated by an AI differ.

Methods

We conducted a Delphi study in three different rounds. The instrument that was used in the different rounds differed regarding the level of complexity. For the first round, the instrument included 57 questions that were derived from ten national nursing expert standards. We used an online-questionnaire for the participating nurses and asked ChatGPT the identical questions. In the second round, nurses and ChatGPT were asked to rate answers from the first round with regard to their relevance in everyday nursing. The third round included writing of an assessment and a nursing handover based on two case studies.

Results

35 nurses (n=35) participated in our study. ChatGPT answered the questions in the second round 35 times. (n=35). The Mann-Whitney-U Test showed significant differences between the answers given by the group of nurses and the group of answers given by ChatGPT in all main categories. Answers to the case study given in the third round (case study 1 n=12 nurses, case study 2 n= 13) were analyzed with qualitative content analysis (Mayring, 2015). Results indicate that nurses' answers and answers given by ChatGPT do not differ except of answers allocated to the categories illness-related demands, stresses and assessment of risks.

Discussion

Our results indicate that ChatGPT is generating comparable answers than nurses do. With regard to the 4-step nursing process [4], we assume that, ChatGPT could be an enrichment in the beginning of the nursing process (for instance with regard to assessment) by summarizing and categorizing patient's information. Furthermore, it could be helpful for nurses in the phase of care planning for instance by receiving an overview on possible interventions. Our study has some limitations. Because ChatGPT is an artificial intelligence, the quality of the answers given depends on the questions asked. Also, quality of the answers depends on the accessibility of literature for ChatGPT.

Implications and future perspectives

Results of our study show, that the use of text-based A.I. models like ChatGPT in nursing can be possible benefit in the future. Because ChatGPT is able to communicate in different languages, it might be a possible intervention to overcome language barriers for instance in nursing handover and nursing documentation. Therefore, future research should focus on training interventions, that qualify nurses for using ChatGPT and give them the possibility to critically evaluate the given answers in specific nursing situations.

References

1. Scerri & Morin, 1-3, 2023.
2. Abdulai & Hung, e12556; 1-3, 2023.
3. Mayring, 15; 68-109, 2015.
4. Yura & Walsh, 1983.